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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/712,638	11/14/2000	Isidore Rigoutsos	YOR920000435US1	8850

7590

08/07/2003

Robert J Mauri  
Ryan Mason & Lewis LLP  
Suite 205  
1300 Post Road  
Fairfield, CT 06430

EXAMINER

LY, CHEYNE D

ART UNIT	PAPER NUMBER
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1631

10

DATE MAILED: 08/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



## U.S. Patent and Trademark Office

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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EXAMINER
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ART UNIT	PAPER
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10

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

## Commissioner for Patents

The reply filed on May 27, 2003 is not fully responsive to the prior Office Action because of the following omission(s) or matter(s): The sequence listing has not been corrected as specified by Paper 5, mailed March 26, 2003 (See attached Raw Sequence Listing Error Report). See 37 CFR 1.111. Since the above-mentioned reply appears to be bona fide, applicant is given ONE (1) MONTH or THIRTY (30) DAYS from the mailing date of this notice, whichever is longer, within which to supply the omission or correction in order to avoid abandonment. EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136(a).

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (see 37 CFR § 1.6(d)). The CM1 Fax Center number is either (703) 308-4242 or (703) 305-3014.

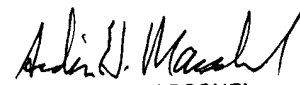
Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Dune Ly, whose telephone number is (703) 308-3880. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (703) 308-4028.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instruments Examiner, Tina Plunkett, whose telephone number is (703) 305-3524 or to the Technical Center receptionist whose telephone number is (703) 308-0196.

C. Dune Ly  
8/5/03

Attachment: Raw Sequence Listing Error Report

  
ARDIN H. MARSCHEL  
PRIMARY EXAMINER



1600

## RAW SEQUENCE LISTING

DATE: 05/30/2003

PATENT APPLICATION: US/09/712,638

TIME: 11:49:40

Input Set : A:\Sequence 1.ST25.txt

Output Set: N:\CRF4\05302003\I712638.raw

3 &lt;110&gt; APPLICANT: IBM Corporation

5 &lt;120&gt; TITLE OF INVENTION: Unsupervised Building and Exploitation of Composite

## Descriptors

7 &lt;130&gt; FILE REFERENCE: YOR920000435US1

9 &lt;140&gt; CURRENT APPLICATION NUMBER: US 09/712,638

10 &lt;141&gt; CURRENT FILING DATE: 2000-11-14

12 &lt;160&gt; NUMBER OF SEQ ID NOS: 59

14 &lt;170&gt; SOFTWARE: PatentIn version 3.2

## ERRORED SEQUENCES

E--> 16 <210> SEQ ID NO: ~~SEQ ID NO 1~~

17 &lt;211&gt; LENGTH: 60

18 &lt;212&gt; TYPE: PRT

19 &lt;213&gt; ORGANISM: Xenopus laevis

E--&gt; 21 &lt;400&gt; SEQUENCE: 1

23 Met Ala Gly Gly Thr Leu Tyr Thr Tyr Pro Asp Asn Trp Arg Ala Tyr

24 1 5 10 15

27 Lys Pro Leu Ile Ala Ala Gln Tyr Ser Gly Phe Pro Ile Lys Val Ala

28 20 25 30

31 Ser Ser Ala Pro Glu Phe Gln Phe Gly Val Thr Asn Lys Thr Pro Glu

32 35 40 45

35 Phe Leu Lys Lys Phe Pro Leu Gly Lys Val Pro Ala

36 50 55 60

E--> 39 <210> SEQ ID NO: ~~SEQ ID NO 2~~

40 &lt;211&gt; LENGTH: 60

41 &lt;212&gt; TYPE: PRT

42 &lt;213&gt; ORGANISM: Fugu rubripes

45 &lt;220&gt; FEATURE:

46 &lt;221&gt; NAME/KEY: misc\_feature

47 &lt;222&gt; LOCATION: (3)..(4)

48 &lt;223&gt; OTHER INFORMATION: Xaa can be any naturally occurring amino acid

50 &lt;220&gt; FEATURE:

51 &lt;221&gt; NAME/KEY: misc\_feature

52 &lt;222&gt; LOCATION: (11)..(22)

53 &lt;223&gt; OTHER INFORMATION: Xaa can be any naturally occurring amino acid

55 &lt;220&gt; FEATURE:

56 &lt;221&gt; NAME/KEY: misc\_feature

57 &lt;222&gt; LOCATION: (39)..(60)

58 &lt;223&gt; OTHER INFORMATION: Xaa can be any naturally occurring amino acid

E--&gt; 60 &lt;400&gt; SEQUENCE: 2

W--&gt; 62 Met Ala Xaa Xaa Thr Leu Tyr Val Ser Pro Xaa Xaa Xaa Xaa Xaa

63 1 5 10 15

(global error)  
do NOT insert alphabetical headings in a "new" sequence

Does Not Comply  
Corrected Diskette Needed

see pp 1-20

Rules  
format  
Sequence  
Listing

(The CRF  
software will  
insert alphabetical  
headings for  
clarity)

## RAW SEQUENCE LISTING

DATE: 05/30/2003

PATENT APPLICATION: US/09/712,638

TIME: 11:49:40

Input Set : A:\Sequence 1.ST25.txt

Output Set: N:\CRF4\05302003\I712638.raw

66 Xaa Xaa Xaa Xaa Xaa Xaa His Leu Asp Asp Phe Arg Ser Leu Leu Ala  
67           20                   25                   30  
70 Leu Val Ala Ala Glu Tyr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
71           35                   40                   45  
74 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
75           50                   55                   60

E--> 78 <210> SEQ ID NO: ~~SEQ ID NO 3~~

79 &lt;211&gt; LENGTH: 60

80 &lt;212&gt; TYPE: PRT

81 &lt;213&gt; ORGANISM: Xenopus laevis

E--&gt; 83 &lt;400&gt; SEQUENCE: 3

85 Phe Glu Gly Lys Asp Gly Phe Cys Leu Phe Glu Ser Ser Ala Ile Ala  
86 1                   5                   10                   15  
89 His Tyr Val Gly Asn Asp Glu Leu Arg Gly Thr Thr Arg Leu His Gln  
90           20                   25                   30  
93 Ala Gln Val Ile Gln Trp Val Ser Phe Ser Asp Ser His Ile Val Pro  
94           35                   40                   45  
97 Pro Ala Ser Ala Trp Val Phe Pro Thr Leu Gly Ile  
98           50                   55                   60

E--> 101 <210> SEQ ID NO: ~~SEQ ID NO 4~~

102 &lt;211&gt; LENGTH: 60

103 &lt;212&gt; TYPE: PRT

104 &lt;213&gt; ORGANISM: Fugu rubripes

107 &lt;220&gt; FEATURE:

108 &lt;221&gt; NAME/KEY: misc\_feature

109 &lt;222&gt; LOCATION: (1)..(7)

110 &lt;223&gt; OTHER INFORMATION: Xaa can be any naturally occurring amino acid

112 &lt;220&gt; FEATURE:

113 &lt;221&gt; NAME/KEY: misc\_feature

114 &lt;222&gt; LOCATION: (9)..(19)

115 &lt;223&gt; OTHER INFORMATION: Xaa can be any naturally occurring amino acid

117 &lt;220&gt; FEATURE:

118 &lt;221&gt; NAME/KEY: misc\_feature

119 &lt;222&gt; LOCATION: (25)..(31)

120 &lt;223&gt; OTHER INFORMATION: Xaa can be any naturally occurring amino acid

E--&gt; 122 &lt;400&gt; SEQUENCE: 4

124 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
125 1                   5                   10                   15  
128 Xaa Xaa Xaa Gly Asn Ala Lys Gln Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gln  
129           20                   25                   30  
132 Ser Gln Val Trp Gln Trp Leu Ser Phe Ala Asp Asn Glu Leu Thr Pro  
133           35                   40                   45  
136 Val Ser Cys Ala Val Val Phe Pro Leu Met Gly Met  
137           50                   55                   60

E--> 140 <210> SEQ ID NO: ~~SEQ ID NO 5~~

141 &lt;211&gt; LENGTH: 60

142 &lt;212&gt; TYPE: PRT

143 &lt;213&gt; ORGANISM: Xenopus laevis

E--&gt; 145 &lt;400&gt; SEQUENCE: 5

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/712,638

DATE: 05/30/2003

TIME: 11:49:40

Input Set : A:\Sequence 1.ST25.txt

Output Set: N:\CRF4\05302003\I712638.raw

147 Met Gln Tyr Asn Lys Gln Ala Thr Glu Gln Ala Lys Glu Gly Ile Lys  
148 1 5 10 15  
151 Thr Val Leu Gly Val Leu Asp Ser His Leu Gln Thr Arg Thr Phe Leu  
152 20 25 30  
155 Val Gly Glu Arg Ile Thr Leu Ala Asp Ile Thr Val Thr Cys Ser Leu  
156 35 40 45  
159 Leu Trp Leu Tyr Lys Gln Val Leu Glu Pro Ser Phe  
160 50 55 60

E--> 163 <210> SEQ ID NO: ~~SEQ ID NO 6~~

164 &lt;211&gt; LENGTH: 60

165 &lt;212&gt; TYPE: PRT

166 &lt;213&gt; ORGANISM: Fugu rubripes

E--&gt; 168 &lt;400&gt; SEQUENCE: 6

170 Thr Gly Leu Asp Lys Lys Ile Gln Gln Asn Ser Arg Val Glu Leu Met  
171 1 5 10 15  
174 Arg Val Leu Lys Val Leu Asp Gln Ala Leu Glu Pro Arg Thr Phe Leu  
175 20 25 30  
178 Val Gly Glu Ser Ile Thr Leu Ala Asp Met Ala Val Ala Met Ala Val  
179 35 40 45  
182 Leu Leu Pro Phe Lys Tyr Val Leu Glu Pro Ser Asp  
183 50 55 60

E--> 186 <210> SEQ ID NO: ~~SEQ ID NO 7~~

187 &lt;211&gt; LENGTH: 60

188 &lt;212&gt; TYPE: PRT

189 &lt;213&gt; ORGANISM: Xenopus laevis

E--&gt; 191 &lt;400&gt; SEQUENCE: 7

193 Arg Gln Pro Phe Gly Asn Val Thr Arg Trp Phe Val Thr Cys Val Asn  
194 1 5 10 15  
197 Gln Pro Glu Phe Arg Ala Val Leu Gly Glu Val Lys Leu Cys Asp Lys  
198 20 25 30  
201 Met Ala Gln Phe Asp Ala Lys Lys Phe Ala Glu Met Gln Pro Lys Lys  
202 35 40 45  
205 Glu Thr Pro Lys Lys Glu Lys Pro Ala Lys Glu Pro  
206 50 55 60

E--> 209 <210> SEQ ID NO: ~~SEQ ID NO 8~~

210 &lt;211&gt; LENGTH: 59

211 &lt;212&gt; TYPE: PRT

212 &lt;213&gt; ORGANISM: Fugu rubripes

E--&gt; 214 &lt;400&gt; SEQUENCE: 8

216 Arg Asn Val Leu Met Asn Val Thr Arg Trp Phe Thr Thr Cys Ile Asn  
217 1 5 10 15  
220 Gln Pro Glu Phe Leu Lys Val Leu Gly Lys Ile Ser Leu Cys Glu Lys  
221 20 25 30  
224 Met Val Pro Val Thr Ala Lys Thr Ser Thr Glu Glu Ala Ala Val  
225 35 40 45  
228 His Pro Asp Ala Ala Ala Leu Asn Gly Pro Pro  
229 50 55

E--> 232 <210> SEQ ID NO: ~~SEQ ID NO 9~~

233 &lt;211&gt; LENGTH: 60

## RAW SEQUENCE LISTING

DATE: 05/30/2003

PATENT APPLICATION: US/09/712,638

TIME: 11:49:40

Input Set : A:\Sequence 1.ST25.txt

Output Set: N:\CRF4\05302003\I712638.raw

234 <212> TYPE: PRT  
235 <213> ORGANISM: Xenopus laevis  
238 <220> FEATURE:  
239 <221> NAME/KEY: misc\_feature  
240 <222> LOCATION: (44)..(44)  
241 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

## E--&gt; 243 &lt;400&gt; SEQUENCE: 9

245 Lys Lys Glu Lys Glu Glu Lys Lys Lys Ala Ala Pro Thr Pro Ala Pro  
246 1 5 10 15  
249 Ala Pro Glu Asp Asp Leu Asp Glu Ser Glu Lys Ala Leu Ala Ala Glu  
250 20 25 30  
253 Pro Lys Ser Lys Asp Pro Tyr Ala His Leu Pro Xaa Lys Ser Ser Phe  
254 35 40 45  
257 Ile Met Asp Glu Phe Lys Arg Lys Tyr Ser Asn Glu  
258 50 55 60

E--> 261 <210> SEQ ID NO: ~~SEQ ID NO 10~~

262 <211> LENGTH: 60  
263 <212> TYPE: PRT  
264 <213> ORGANISM: Fugu rubripes

## E--&gt; 266 &lt;400&gt; SEQUENCE: 10

268 Lys Thr Glu Ala Gln Leu Lys Lys Glu Ala Lys Lys Arg Glu Lys Leu  
269 1 5 10 15  
272 Glu Lys Phe Gln Gln Lys Lys Glu Met Glu Ala Lys Lys Lys Met Gln  
273 20 25 30  
276 Pro Val Ala Glu Lys Lys Ala Lys Pro Glu Lys Arg Glu Leu Gly Val  
277 35 40 45  
280 Ile Thr Tyr Asp Ile Pro Thr Pro Ser Gly Glu Lys  
281 50 55 60

E--> 284 <210> SEQ ID NO: ~~SEQ ID NO 11~~

285 <211> LENGTH: 60  
286 <212> TYPE: PRT  
287 <213> ORGANISM: Xenopus laevis  
290 <220> FEATURE:  
291 <221> NAME/KEY: misc\_feature  
292 <222> LOCATION: (12)..(12)  
293 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
295 <220> FEATURE:  
296 <221> NAME/KEY: misc\_feature  
297 <222> LOCATION: (28)..(28)  
298 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
300 <220> FEATURE:  
301 <221> NAME/KEY: misc\_feature  
302 <222> LOCATION: (51)..(51)  
303 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

## E--&gt; 305 &lt;400&gt; SEQUENCE: 11

307 Asp Thr Leu Thr Val Ala Leu Pro Tyr Phe Trp Xaa Glu His Phe Asp  
308 1 5 10 15  
311 Lys Glu Gly Trp Ser Ile Trp Tyr Ala Glu Tyr Xaa Lys Phe Pro Glu  
312 20 25 30

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/712,638

DATE: 05/30/2003

TIME: 11:49:40

Input Set : A:\Sequence 1.ST25.txt

Output Set: N:\CRF4\05302003\I712638.raw

315 Glu Leu Thr Gln Ala Phe Met Ser Cys Asn Leu Ile Thr Gly Met Phe  
316           35                   40                   45  
319 Gln Arg Xaa Leu Asp Lys Leu Arg Lys Thr Gly Phe  
320       50                   55                   60

E--> 323 <210> SEQ ID NO: ~~SEQ ID NO 12~~

324 &lt;211&gt; LENGTH: 60

325 &lt;212&gt; TYPE: PRT

326 &lt;213&gt; ORGANISM: Fugu rubripes

E--&gt; 328 &lt;400&gt; SEQUENCE: 12

330 Lys Asp Val Val Ser Pro Leu Pro Asp Ser Tyr Ser Pro Gln Tyr Val  
331 1                   5                   10                   15  
334 Glu Ala Ala Trp Tyr Pro Trp Trp Glu Lys Gln Gly Phe Phe Lys Pro  
335           20                   25                   30  
338 Glu Phe Gly Arg Lys Ser Ile Gly Glu Gln Asn Pro Arg Gly Ile Phe  
339       35                   40                   45  
342 Met Met Cys Ile Pro Pro Pro Asn Val Thr Gly Ser  
343       50                   55                   60

E--> 346 <210> SEQ ID NO: ~~SEQ ID NO 13~~

347 &lt;211&gt; LENGTH: 60

348 &lt;212&gt; TYPE: PRT

349 &lt;213&gt; ORGANISM: Xenopus laevis

352 &lt;220&gt; FEATURE:

353 &lt;221&gt; NAME/KEY: misc\_feature

354 &lt;222&gt; LOCATION: (20)..(20)

355 &lt;223&gt; OTHER INFORMATION: Xaa can be any naturally occurring amino acid

357 &lt;220&gt; FEATURE:

358 &lt;221&gt; NAME/KEY: misc\_feature

359 &lt;222&gt; LOCATION: (34)..(38)

360 &lt;223&gt; OTHER INFORMATION: Xaa can be any naturally occurring amino acid

362 &lt;220&gt; FEATURE:

363 &lt;221&gt; NAME/KEY: misc\_feature

364 &lt;222&gt; LOCATION: (59)..(60)

365 &lt;223&gt; OTHER INFORMATION: Xaa can be any naturally occurring amino acid

E--&gt; 367 &lt;400&gt; SEQUENCE: 13

369 Ala Ser Val Ile Leu Phe Gly Thr Asn Asn Asn Ser Ser Ile Ser Gly  
370 1                   5                   10                   15  
373 Val Trp Val Xaa Phe Arg Gly Gln Asp Leu Ala Phe Thr Leu Ser Glu  
374       20                   25                   30  
377 Asp Xaa Xaa Xaa Xaa Xaa Trp Gln Ile Asp Tyr Glu Ser Tyr Asn Trp  
378       35                   40                   45  
381 Arg Lys Leu Asp Ser Gly Ser Glu Glu Cys Xaa Xaa  
382       50                   55                   60

E--> 385 <210> SEQ ID NO: ~~SEQ ID NO 14~~

386 &lt;211&gt; LENGTH: 60

387 &lt;212&gt; TYPE: PRT

388 &lt;213&gt; ORGANISM: Fugu rubripes

E--&gt; 390 &lt;400&gt; SEQUENCE: 14

392 Leu His Leu Gly His Ala Leu Thr Asn Ala Ile Gln Asp Thr Leu Thr  
393 1                   5                   10                   15

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/712,638

DATE: 05/30/2003

TIME: 11:49:40

Input Set : A:\Sequence 1.ST25.txt

Output Set: N:\CRF4\05302003\I712638.raw

396 Arg Trp His Arg Met Arg Gly Glu Thr Thr Leu Trp Asn Pro Gly Cys  
397           20                           25                           30  
400 Asp His Ala Gly Ile Ala Thr Gln Val Val Val Glu Lys Lys Leu Met  
401           35                           40                           45  
404 Arg Glu Lys Gly Thr Ser Arg His Asp Leu Gly Arg  
405       50                           55                           60

E--> 408 <210> SEQ ID NO: ~~SEQ ID NO 15~~

409 &lt;211&gt; LENGTH: 60

410 &lt;212&gt; TYPE: PRT

411 &lt;213&gt; ORGANISM: Xenopus laevis

414 &lt;220&gt; FEATURE:

415 &lt;221&gt; NAME/KEY: misc\_feature

416 &lt;222&gt; LOCATION: (14)..(21)

417 &lt;223&gt; OTHER INFORMATION: Xaa can be any naturally occurring amino acid

419 &lt;220&gt; FEATURE:

420 &lt;221&gt; NAME/KEY: misc\_feature

421 &lt;222&gt; LOCATION: (33)..(33)

422 &lt;223&gt; OTHER INFORMATION: Xaa can be any naturally occurring amino acid

424 &lt;220&gt; FEATURE:

425 &lt;221&gt; NAME/KEY: misc\_feature

426 &lt;222&gt; LOCATION: (38)..(60)

427 &lt;223&gt; OTHER INFORMATION: Xaa can be any naturally occurring amino acid

E--&gt; 429 &lt;400&gt; SEQUENCE: 15

431 Lys Thr Leu Val Lys Glu Tyr Phe Ala Trp Glu Gly Glu Xaa Xaa Xaa  
432 1                           5                           10                           15  
435 Xaa Xaa Xaa Xaa Xaa Phe Lys Asn Val Gly Lys Pro Phe Asn Gln Gly  
436           20                           25                           30  
439 Xaa Lys Ile Phe Lys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
440       35                           40                           45  
443 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
444       50                           55                           60

E--> 447 <210> SEQ ID NO: ~~SEQ ID NO 16~~

448 &lt;211&gt; LENGTH: 60

449 &lt;212&gt; TYPE: PRT

450 &lt;213&gt; ORGANISM: Fugu rubripes

E--&gt; 452 &lt;400&gt; SEQUENCE: 16

454 Glu Lys Phe Ile Glu Glu Val Trp Lys Trp Lys Asn Glu Lys Gly Asp  
455 1                           5                           10                           15  
458 Arg Ile Tyr His Gln Leu Lys Lys Leu Gly Ser Ser Leu Asp Trp Asp  
459       20                           25                           30  
462 Arg Ala Cys Phe Thr Met Asp Pro Lys Leu Ser Tyr Ala Val Gln Glu  
463       35                           40                           45  
466 Ala Phe Ile Arg Met His Asp Glu Gly Val Ile Tyr  
467       50                           55                           60

E--> 470 <210> SEQ ID NO: ~~SEQ ID NO 17~~

471 &lt;211&gt; LENGTH: 60

472 &lt;212&gt; TYPE: PRT

473 &lt;213&gt; ORGANISM: Mus musculus

476 &lt;220&gt; FEATURE:



## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/712,638

DATE: 05/30/2003

TIME: 11:49:40

Input Set : A:\Sequence 1.ST25.txt

Output Set: N:\CRF4\05302003\I712638.raw

477 <221> NAME/KEY: misc\_feature  
478 <222> LOCATION: (1)..(1)  
479 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
481 <220> FEATURE:  
482 <221> NAME/KEY: misc\_feature  
483 <222> LOCATION: (59)..(59)  
484 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

E--> 486 <400> SEQUENCE: 17  
488 Xaa Val Leu Glu Leu Tyr Leu Asp Leu Leu Ser Gln Pro Cys Arg Ala  
489 1 5 10 15  
492 Ile Tyr Ile Phe Ala Lys Lys Asn Asn Ile Pro Phe Gln Met His Thr  
493 20 25 30  
496 Val Glu Leu Arg Lys Gly Glu His Leu Ser Asp Ala Phe Ala Arg Val  
497 35 40 45  
500 Asn Pro Met Lys Lys Val Pro Ala Met Met Xaa Asp  
501 50 55 60

E--> 504 <210> SEQ ID NO: ~~SEQ ID NO 18~~  
505 <211> LENGTH: 60  
506 <212> TYPE: PRT  
507 <213> ORGANISM: Rattus norvegicus  
510 <220> FEATURE:  
511 <221> NAME/KEY: misc\_feature  
512 <222> LOCATION: (1)..(1)  
513 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
515 <220> FEATURE:  
516 <221> NAME/KEY: misc\_feature  
517 <222> LOCATION: (59)..(59)  
518 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

E--> 520 <400> SEQUENCE: 18  
522 Xaa Val Leu Glu Leu Tyr Leu Asp Leu Leu Ser Gln Pro Cys Arg Ala  
523 1 5 10 15  
526 Ile Tyr Ile Phe Ala Lys Lys Asn Asn Ile Pro Phe Gln Met His Thr  
527 20 25 30  
530 Val Glu Leu Arg Lys Gly Glu His Leu Ser Asp Ala Phe Ala Gln Val  
531 35 40 45  
534 Asn Pro Met Lys Lys Val Pro Ala Met Lys Xaa Asp  
535 50 55 60

E--> 538 <210> SEQ ID NO: ~~SEQ ID NO 19~~  
539 <211> LENGTH: 60  
540 <212> TYPE: PRT  
541 <213> ORGANISM: Artemia salina

E--> 543 <400> SEQUENCE: 19  
545 Val Ala Gly Lys Leu Tyr Thr Tyr Pro Glu Asn Phe Arg Ala Phe Lys  
546 1 5 10 15  
549 Ala Leu Ile Ala Ala Gln Tyr Ser Gly Ala Lys Leu Glu Ile Ala Lys  
550 20 25 30  
553 Ser Phe Val Phe Gly Glu Thr Asn Lys Ser Asp Ala Phe Leu Lys Ser  
554 35 40 45  
557 Phe Pro Leu Gly Lys Val Pro Ala Phe Glu Ser Ala

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/712,638

DATE: 05/30/2003

TIME: 11:49:40

Input Set : A:\Sequence 1.ST25.txt

Output Set: N:\CRF4\05302003\I712638.raw

558            50                            55                            60

E--> 561 <210> SEQ ID NO: ~~SEQ ID NO 20~~  
562 <211> LENGTH: 60  
563 <212> TYPE: PRT  
564 <213> ORGANISM: Mus musculus  
567 <220> FEATURE:  
568 <221> NAME/KEY: misc\_feature  
569 <222> LOCATION: (19)..(42)  
570 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

E--> 572 <400> SEQUENCE: 20  
574 Gly Gly Phe Thr Leu Cys Glu Ser Val Ala Ile Leu Leu Tyr Leu Ala  
575 1                            5                            10                            15  
578 His Lys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
579                            20                            25                            30  
582 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Lys Val Pro Asp His  
583                            35                            40                            45  
586 Trp Tyr Pro Gln Asp Leu Gln Ala Arg Ala Arg Val  
587            50                            55                            60

E--> 590 <210> SEQ ID NO: ~~SEQ ID NO 21~~  
591 <211> LENGTH: 60  
592 <212> TYPE: PRT  
593 <213> ORGANISM: Rattus norvegicus  
596 <220> FEATURE:  
597 <221> NAME/KEY: misc\_feature  
598 <222> LOCATION: (19)..(42)  
599 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

E--> 601 <400> SEQUENCE: 21  
603 Gly Gly Phe Thr Leu Cys Glu Ser Val Ala Ile Leu Leu Tyr Leu Ala  
604 1                            5                            10                            15  
607 His Lys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
608                            20                            25                            30  
611 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Lys Val Pro Asp His  
612                            35                            40                            45  
615 Trp Tyr Pro Gln Asp Leu Gln Ala Arg Ala Arg Val  
616            50                            55                            60

E--> 619 <210> SEQ ID NO: ~~SEQ ID NO 22~~  
620 <211> LENGTH: 60  
621 <212> TYPE: PRT  
622 <213> ORGANISM: Artemia salina

E--> 624 <400> SEQUENCE: 22  
626 Asp Gly His Cys Ile Ala Glu Ser Asn Ala Ile Ala Tyr Tyr Val Ala  
627 1                            5                            10                            15  
630 Asn Glu Thr Leu Arg Gly Ser Ser Asp Leu Glu Lys Ala Gln Ile Ile  
631                            20                            25                            30  
634 Gln Trp Met Thr Phe Ala Asp Thr Glu Ile Leu Pro Ala Ser Cys Thr  
635                            35                            40                            45  
638 Trp Val Phe Pro Val Leu Gly Ile Met Gln Phe Asn  
639            50                            55                            60

E--> 642 <210> SEQ ID NO: ~~SEQ ID NO 23~~

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643 <211> LENGTH: 60  
644 <212> TYPE: PRT  
645 <213> ORGANISM: Mus musculus  
E--> 647 <400> SEQUENCE: 23  
649 Asp Glu Tyr Leu Ala Trp Gln His Thr Gly Leu Arg Arg Ser Cys Leu  
650 1 5 10 15  
653 Arg Ala Leu Trp His Lys Val Met Phe Pro Val Phe Leu Gly Glu Gln  
654 20 25 30  
657 Ile Pro Pro Glu Thr Leu Ala Ala Thr Leu Ala Glu Leu Asp Val Asn  
658 35 40 45  
661 Leu Gln Val Leu Glu Asp Lys Phe Leu Gln Asp Lys  
662 50 55 60

E--> 665 <210> SEQ ID NO: ~~SEQ ID NO 24~~  
666 <211> LENGTH: 60  
667 <212> TYPE: PRT  
668 <213> ORGANISM: Rattus norvegicus  
E--> 670 <400> SEQUENCE: 24  
672 Asp Glu Tyr Leu Ala Trp Gln His Thr Thr Leu Arg Arg Ser Cys Leu  
673 1 5 10 15  
676 Arg Thr Leu Trp His Lys Val Met Phe Pro Val Phe Leu Gly Glu Gln  
677 20 25 30  
680 Ile Arg Pro Glu Met Leu Ala Ala Thr Leu Ala Asp Leu Asp Val Asn  
681 35 40 45  
684 Val Gln Val Leu Glu Asp Gln Phe Leu Gln Asp Lys  
685 50 55 60

E--> 688 <210> SEQ ID NO: ~~SEQ ID NO 25~~  
689 <211> LENGTH: 60  
690 <212> TYPE: PRT  
691 <213> ORGANISM: Artemia salina  
E--> 693 <400> SEQUENCE: 25  
695 Lys Gln Ala Thr Ala Arg Ala Lys Glu Asp Ile Asp Lys Ala Leu Gln  
696 1 5 10 15  
699 Ala Leu Asp Asp His Leu Leu Thr Arg Thr Tyr Leu Val Gly Glu Arg  
700 20 25 30  
703 Ile Thr Leu Ala Asp Ile Val Val Thr Cys Thr Leu Leu His Leu Tyr  
704 35 40 45  
707 Gln His Val Leu Asp Glu Ala Phe Arg Lys Ser Tyr  
708 50 55 60

E--> 711 <210> SEQ ID NO: ~~SEQ ID NO 26~~  
712 <211> LENGTH: 60  
713 <212> TYPE: PRT  
714 <213> ORGANISM: Mus musculus  
E--> 716 <400> SEQUENCE: 26  
718 Asp Phe Leu Val Gly Pro His Ile Ser Leu Ala Asp Leu Val Ala Ile  
719 1 5 10 15  
722 Thr Glu Leu Met His Pro Val Gly Gly Cys Pro Val Phe Glu Gly  
723 20 25 30  
726 His Pro Arg Leu Ala Ala Trp Tyr Gln Arg Val Glu Ala Ala Val Gly  
727 35 40 45

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730 Lys Asp Leu Phe Arg Glu Ala His Glu Val Ile Leu
731      50                      55                      60
E--> 734 <210> SEQ ID NO: SEQ ID NO 27
735 <211> LENGTH: 60
736 <212> TYPE: PRT
737 <213> ORGANISM: Rattus norvegicus
E--> 739 <400> SEQUENCE: 27
741 Asp Phe Leu Val Gly Pro His Ile Ser Leu Ala Asp Val Val Ala Ile
742 1      5                      10                      15
745 Thr Glu Leu Met His Pro Val Gly Gly Gly Cys Pro Val Phe Glu Gly
746      20                      25                      30
749 Arg Pro Arg Leu Ala Ala Trp Tyr Arg Arg Val Glu Ala Ala Val Gly
750      35                      40                      45
753 Lys Asp Leu Phe Leu Glu Ala His Glu Val Ile Leu
754      50                      55                      60
E--> 757 <210> SEQ ID NO: SEQ ID NO 28
758 <211> LENGTH: 60
759 <212> TYPE: PRT
760 <213> ORGANISM: Artemia salina
763 <220> FEATURE:
764 <221> NAME/KEY: misc_feature
765 <222> LOCATION: (35)..(37)
766 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
E--> 768 <400> SEQUENCE: 28
770 Val Asn Thr Asn Arg Trp Phe Ile Thr Leu Ile Asn Gln Lys Gln Val
771 1      5                      10                      15
774 Lys Ala Val Ile Gly Asp Phe Lys Leu Cys Glu Lys Ala Gly Glu Phe
775      20                      25                      30
778 Asp Pro Xaa Xaa Xaa Lys Lys Tyr Ala Glu Phe Gln Ala Ala Ile Gly
779      35                      40                      45
782 Ser Gly Glu Lys Lys Lys Thr Glu Lys Ala Pro Lys
783      50                      55                      60
E--> 786 <210> SEQ ID NO: SEQ ID NO 29
787 <211> LENGTH: 60
788 <212> TYPE: PRT
789 <213> ORGANISM: Mus musculus
792 <220> FEATURE:
793 <221> NAME/KEY: misc_feature
794 <222> LOCATION: (26)..(60)
795 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
E--> 797 <400> SEQUENCE: 29
799 Lys Val Lys Asp Cys Pro Pro Ala Asp Leu Ile Ile Lys Gln Lys Leu
800 1      5                      10                      15
803 Met Pro Arg Val Leu Thr Met Ile Gln Xaa Xaa Xaa Xaa Xaa Xaa Xaa
804      20                      25                      30
807 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
808      35                      40                      45
811 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
812      50                      55                      60

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E--> 815 <210> SEQ ID NO: ~~SEQ ID NO 30~~  
816 <211> LENGTH: 60  
817 <212> TYPE: PRT  
818 <213> ORGANISM: Rattus norvegicus  
821 <220> FEATURE:  
822 <221> NAME/KEY: misc\_feature  
823 <222> LOCATION: (26)..(60)  
824 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

E--> 826 <400> SEQUENCE: 30  
828 Lys Val Arg Asp Cys Pro Pro Ala Asp Pro Val Ile Lys Gln Lys Leu  
829 1 5 10 15  
832 Met Pro Arg Val Leu Thr Met Ile Gln Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
833 20 25 30  
836 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
837 35 40 45  
840 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
841 50 55 60

E--> 844 <210> SEQ ID NO: ~~SEQ ID NO 31~~  
845 <211> LENGTH: 60  
846 <212> TYPE: PRT  
847 <213> ORGANISM: Artemia salina

E--> 849 <400> SEQUENCE: 31  
851 Ala Val Lys Ala Lys Pro Glu Lys Lys Glu Val Pro Lys Lys Glu Gln  
852 1 5 10 15  
855 Glu Glu Pro Ala Asp Ala Ala Glu Glu Ala Leu Ala Ala Glu Pro Lys  
856 20 25 30  
859 Ser Lys Asp Pro Phe Asp Glu Met Pro Lys Gly Thr Phe Asn Met Asp  
860 35 40 45  
863 Asp Phe Lys Arg Phe Tyr Ser Asn Asn Glu Glu Thr  
864 50 55 60

E--> 867 <210> SEQ ID NO: ~~SEQ ID NO 32~~  
868 <211> LENGTH: 60  
869 <212> TYPE: PRT  
870 <213> ORGANISM: Mus musculus  
873 <220> FEATURE:  
874 <221> NAME/KEY: misc\_feature  
875 <222> LOCATION: (1)..(60)  
876 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

E--> 878 <400> SEQUENCE: 32  
880 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
881 1 5 10 15  
884 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
885 20 25 30  
888 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
889 35 40 45  
892 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
893 50 55 60

E--> 896 <210> SEQ ID NO: ~~SEQ ID NO 33~~  
897 <211> LENGTH: 60

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Input Set : A:\Sequence 1.ST25.txt

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898 <212> TYPE: PRT  
899 <213> ORGANISM: Rattus norvegicus  
902 <220> FEATURE:  
903 <221> NAME/KEY: misc\_feature  
904 <222> LOCATION: (1)..(60)  
905 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
E--> 907 <400> SEQUENCE: 33  
909 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
910 1 5 10 15  
913 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
914 20 25 30  
917 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
918 35 40 45  
921 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
922 50 55 60  
E--> 925 <210> SEQ ID NO: ~~SEQ ID NO 34~~  
926 <211> LENGTH: 60  
927 <212> TYPE: PRT  
928 <213> ORGANISM: Artemia salina  
E--> 930 <400> SEQUENCE: 34  
932 Lys Ser Ile Pro Tyr Phe Trp Glu Lys Phe Asp Lys Glu Asn Tyr Ser  
933 1 5 10 15  
936 Ile Trp Tyr Ser Glu Tyr Lys Tyr Gln Asp Glu Leu Ala Lys Val Tyr  
937 20 25 30  
940 Met Ser Cys Asn Leu Ile Thr Gly Met Phe Gln Arg Ile Glu Lys Met  
941 35 40 45  
944 Arg Lys Gln Ala Phe Ala Ser Val Cys Val Phe Gly  
945 50 55 60  
E--> 948 <210> SEQ ID NO: ~~SEQ ID NO 35~~  
949 <211> LENGTH: 60  
950 <212> TYPE: PRT  
951 <213> ORGANISM: Mus musculus  
954 <220> FEATURE:  
955 <221> NAME/KEY: misc\_feature  
956 <222> LOCATION: (1)..(60)  
957 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
E--> 959 <400> SEQUENCE: 35  
961 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
962 1 5 10 15  
965 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
966 20 25 30  
969 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
970 35 40 45  
973 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
974 50 55 60  
E--> 977 <210> SEQ ID NO: ~~SEQ ID NO 36~~  
978 <211> LENGTH: 60  
979 <212> TYPE: PRT  
980 <213> ORGANISM: Rattus norvegicus

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983 <220> FEATURE:  
984 <221> NAME/KEY: misc\_feature  
985 <222> LOCATION: (1)..(60)  
986 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

E--> 988 <400> SEQUENCE: 36  
990 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
991 1 5 10 15  
994 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
995 20 25 30  
998 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
999 35 40 45  
1002 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
1003 50 55 60

E--> 1006 <210> SEQ ID NO: ~~SEQ ID NO 37~~  
1007 <211> LENGTH: 60  
1008 <212> TYPE: PRT  
1009 <213> ORGANISM: Artemia salina

E--> 1011 <400> SEQUENCE: 37  
1013 Glu Asp Asn Asp Ser Ser Ile Ser Gly Ile Trp Val Trp Arg Gly Gln  
1014 1 5 10 15  
1017 Asp Leu Ala Phe Lys Leu Ser Pro Asp Trp Gln Ile Asp Tyr Glu Ser  
1018 20 25 30  
1021 Tyr Asp Trp Lys Lys Leu Asp Pro Asp Ala Gln Glu Thr Lys Asp Leu  
1022 35 40 45  
1025 Val Thr Gln Tyr Phe Thr Trp Thr Gly Thr Asp Lys  
1026 50 55 60

E--> 1029 <210> SEQ ID NO: ~~SEQ ID NO 38~~  
1030 <211> LENGTH: 12  
1031 <212> TYPE: PRT  
1032 <213> ORGANISM: Mus musculus  
1035 <220> FEATURE:  
1036 <221> NAME/KEY: misc\_feature  
1037 <222> LOCATION: (1)..(12)  
1038 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

E--> 1040 <400> SEQUENCE: 38  
1042 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
1043 1 5 10

E--> 1046 <210> SEQ ID NO: ~~SEQ ID NO 39~~  
1047 <211> LENGTH: 12  
1048 <212> TYPE: PRT  
1049 <213> ORGANISM: Rattus norvegicus  
1052 <220> FEATURE:  
1053 <221> NAME/KEY: misc\_feature  
1054 <222> LOCATION: (1)..(12)  
1055 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

E--> 1057 <400> SEQUENCE: 39  
1059 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
1060 1 5 10

E--> 1063 <210> SEQ ID NO: ~~SEQ ID NO 40~~

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1064 <211> LENGTH: 12  
1065 <212> TYPE: PRT  
1066 <213> ORGANISM: Artemia salina  
E--> 1068 <400> SEQUENCE: 40  
1070 Gln Gly Arg Lys Phe Asn Gln Gly Lys Ile Phe Lys  
1071 1 5 10

E--> 1074 <210> SEQ ID NO: ~~SEQ ID NO 41~~  
1075 <211> LENGTH: 60  
1076 <212> TYPE: PRT  
1077 <213> ORGANISM: Caenorhabditis elegans  
1080 <220> FEATURE:  
1081 <221> NAME/KEY: misc\_feature  
1082 <222> LOCATION: (1)..(4)  
1083 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
1085 <220> FEATURE:  
1086 <221> NAME/KEY: misc\_feature  
1087 <222> LOCATION: (8)..(10)  
1088 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
1090 <220> FEATURE:  
1091 <221> NAME/KEY: misc\_feature  
1092 <222> LOCATION: (19)..(20)  
1093 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
E--> 1095 <400> SEQUENCE: 41  
1097 Xaa Xaa Xaa Xaa Asn Phe Asp Xaa Xaa Xaa Lys Lys Thr Val Glu Gln  
1098 1 5 10 15  
1101 Tyr Lys Xaa Xaa Asn Glu Leu Asn Gly Gln Leu Gln Val Leu Asp Arg  
1102 20 25 30  
1105 Val Leu Val Lys Lys Thr Tyr Leu Val Gly Glu Arg Leu Ser Leu Ala  
1106 35 40 45  
1109 Asp Val Ser Val Ala Leu Asp Leu Leu Pro Ala Phe  
1110 50 55 60

E--> 1113 <210> SEQ ID NO: ~~SEQ ID NO 42~~  
1114 <211> LENGTH: 60  
1115 <212> TYPE: PRT  
1116 <213> ORGANISM: Homo sapien

E--> 1118 <400> SEQUENCE: 42  
1120 Met Glu His Thr Glu Ile Asp His Trp Leu Glu Phe Ser Ala Thr Lys  
1121 1 5 10 15  
1124 Leu Ser Ser Cys Asp Ser Phe Thr Ser Thr Ile Asn Glu Leu Asn His  
1125 20 25 30  
1128 Cys Leu Ser Leu Arg Thr Tyr Leu Val Gly Asn Ser Leu Ser Leu Ala  
1129 35 40 45  
1132 Asp Leu Cys Val Trp Ala Thr Leu Lys Gly Asn Ala  
1133 50 55 60

E--> 1136 <210> SEQ ID NO: ~~SEQ ID NO 43~~  
1137 <211> LENGTH: 60  
1138 <212> TYPE: PRT  
1139 <213> ORGANISM: Caenorhabditis elegans  
1142 <220> FEATURE:



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1143 <221> NAME/KEY: misc\_feature  
1144 <222> LOCATION: (32)..(33)  
1145 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
1147 <220> FEATURE:  
1148 <221> NAME/KEY: misc\_feature  
1149 <222> LOCATION: (43)..(43)  
1150 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
1152 <220> FEATURE:  
1153 <221> NAME/KEY: misc\_feature  
1154 <222> LOCATION: (46)..(46)  
1155 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
1157 <220> FEATURE:  
1158 <221> NAME/KEY: misc\_feature  
1159 <222> LOCATION: (51)..(52)  
1160 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
1162 <220> FEATURE:  
1163 <221> NAME/KEY: misc\_feature  
1164 <222> LOCATION: (60)..(60)  
1165 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
E--> 1167 <400> SEQUENCE: 43  
1169 Gln Tyr Val Leu Asp Ala Asn Ala Arg Lys Ser Ile Val Asn Val Thr  
1170 1 5 10 15  
1173 Arg Trp Phe Arg Thr Val Val Asn Gln Pro Ala Val Lys Glu Val Xaa  
1174 20 25 30  
1177 Xaa Leu Gly Glu Val Ser Leu Ala Ser Ser Xaa Val Ala Xaa Gln Phe  
1178 35 40 45  
1181 Asn Gln Xaa Xaa Ala Lys Phe Thr Glu Leu Ser Xaa  
1182 50 55 60  
E--> 1185 <210> SEQ ID NO: ~~SEQ ID NO~~ 44  
1186 <211> LENGTH: 60  
1187 <212> TYPE: PRT  
1188 <213> ORGANISM: Homo sapien  
E--> 1190 <400> SEQUENCE: 44  
1192 Ala Trp Gln Glu Gln Leu Lys Gln Lys Lys Ala Pro Val His Val Lys  
1193 1 5 10 15  
1196 Arg Trp Phe Gly Phe Leu Glu Ala Gln Gln Ala Phe Gln Ser Val Gly  
1197 20 25 30  
1200 Thr Lys Trp Asp Val Ser Thr Thr Lys Ala Arg Val Ala Pro Glu Lys  
1201 35 40 45  
1204 Lys Gln Asp Val Gly Lys Phe Val Glu Leu Pro Gly  
1205 50 55 60  
E--> 1208 <210> SEQ ID NO: ~~SEQ ID NO~~ 45  
1209 <211> LENGTH: 60  
1210 <212> TYPE: PRT  
1211 <213> ORGANISM: Caenorhabditis elegans  
1214 <220> FEATURE:  
1215 <221> NAME/KEY: misc\_feature  
1216 <222> LOCATION: (1)..(3)  
1217 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

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1219 <220> FEATURE:  
1220 <221> NAME/KEY: misc\_feature  
1221 <222> LOCATION: (27)..(28)  
1222 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
1224 <220> FEATURE:  
1225 <221> NAME/KEY: misc\_feature  
1226 <222> LOCATION: (32)..(36)  
1227 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
1229 <220> FEATURE:  
1230 <221> NAME/KEY: misc\_feature  
1231 <222> LOCATION: (38)..(44)  
1232 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
1234 <220> FEATURE:  
1235 <221> NAME/KEY: misc\_feature  
1236 <222> LOCATION: (47)..(47)  
1237 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
1239 <220> FEATURE:  
1240 <221> NAME/KEY: misc\_feature  
1241 <222> LOCATION: (55)..(55)  
1242 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
1244 <220> FEATURE:  
1245 <221> NAME/KEY: misc\_feature  
1246 <222> LOCATION: (59)..(60)  
1247 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

## E--&gt; 1249 &lt;400&gt; SEQUENCE: 45

1251 Xaa Xaa Xaa Ala Lys Val Ala Lys Ser Ala Pro Lys Ala Glu Lys Pro  
1252 1 5 10 15  
1255 Lys Lys Glu Ala Lys Pro Ala Ala Ala Xaa Xaa Ala Gln Pro Xaa  
1256 20 25 30  
1259 Xaa Xaa Xaa Xaa Glu Xaa Xaa Xaa Xaa Xaa Xaa Asp Asp Xaa Glu  
1260 35 40 45  
1263 Pro Lys Glu Glu Lys Ser Xaa Lys Asp Pro Xaa Xaa  
1264 50 55 60

E--> 1267 <210> SEQ ID NO: ~~SEQ ID NO~~ 46

1268 <211> LENGTH: 60  
1269 <212> TYPE: PRT  
1270 <213> ORGANISM: Homo sapien

## E--&gt; 1272 &lt;400&gt; SEQUENCE: 46

1274 Ala Glu Met Gly Lys Val Thr Val Arg Phe Pro Pro Glu Ala Ser Gly  
1275 1 5 10 15  
1278 Tyr Leu His Ile Gly His Ala Lys Ala Ala Leu Leu Asn Gln His Tyr  
1279 20 25 30  
1282 Gln Val Asn Phe Lys Gly Lys Leu Ile Met Arg Phe Asp Asp Thr Asn  
1283 35 40 45  
1286 Pro Glu Lys Glu Lys Glu Asp Phe Glu Lys Val Ile  
1287 50 55 60

E--> 1290 <210> SEQ ID NO: ~~SEQ ID NO~~ 47

1291 <211> LENGTH: 60  
1292 <212> TYPE: PRT

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Input Set : A:\Sequence 1.ST25.txt

Output Set: N:\CRF4\05302003\I712638.raw

1293 <213> ORGANISM: Oryctolagus cuniculus

E--> 1295 <400> SEQUENCE: 47

1297 Met Ala Ala Gly Thr Leu Tyr Thr Tyr Pro Glu Asn Trp Arg Ala Phe  
1298 1 5 10 15  
1301 Lys Ala Leu Ile Ala Ala Gln Tyr Ser Gly Ala Gln Val Arg Val Leu  
1302 20 25 30  
1305 Ser Ala Pro Pro His Phe His Phe Gly Gln Thr Asn Arg Thr Pro Glu  
1306 35 40 45  
1309 Phe Leu Arg Lys Phe Pro Ala Gly Lys Val Pro Ala  
1310 50 55 60

E--> 1313 <210> SEQ ID NO: ~~SEQ ID NO 48~~

1314 <211> LENGTH: 60  
1315 <212> TYPE: PRT  
1316 <213> ORGANISM: Zea mays  
1319 <220> FEATURE:  
1320 <221> NAME/KEY: misc\_feature  
1321 <222> LOCATION: (1)..(1)  
1322 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
1324 <220> FEATURE:  
1325 <221> NAME/KEY: misc\_feature  
1326 <222> LOCATION: (43)..(43)  
1327 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

E--> 1329 <400> SEQUENCE: 48

1331 Xaa Ala Thr Pro Ala Val Lys Val Tyr Gly Trp Ala Ile Ser Pro Phe  
1332 1 5 10 15  
1335 Val Ser Arg Ala Leu Leu Ala Leu Glu Glu Ala Gly Val Asp Tyr Glu  
1336 20 25 30  
1339 Leu Val Pro Met Ser Arg Gln Asp Gly Asp Xaa His Arg Arg Pro Glu  
1340 35 40 45  
1343 His Leu Ala Arg Asn Pro Phe Gly Lys Val Pro Val  
1344 50 55 60

E--> 1347 <210> SEQ ID NO: ~~SEQ ID NO 49~~

1348 <211> LENGTH: 60  
1349 <212> TYPE: PRT  
1350 <213> ORGANISM: Oryctolagus cuniculus  
1353 <220> FEATURE:  
1354 <221> NAME/KEY: misc\_feature  
1355 <222> LOCATION: (21)..(24)  
1356 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid  
1358 <220> FEATURE:  
1359 <221> NAME/KEY: misc\_feature  
1360 <222> LOCATION: (57)..(60)  
1361 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

E--> 1363 <400> SEQUENCE: 49

1365 Phe Glu Gly Asp Asp Gly Phe Cys Val Phe Glu Ser Asn Ala Ile Ala  
1366 1 5 10 15  
1369 Tyr Tyr Val Ser Xaa Xaa Xaa Xaa Asn Glu Glu Leu Arg Gly Ser Thr  
1370 20 25 30  
1373 Pro Glu Ala Ala Ala Gln Val Val Gln Trp Val Ser Phe Ala Asp Ser

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/712,638

DATE: 05/30/2003

TIME: 11:49:40

Input Set : A:\Sequence 1.ST25.txt

Output Set: N:\CRF4\05302003\I712638.raw

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1374          35          40          45
1377 Asp Ile Val Pro Pro Ala Ser Thr Xaa Xaa Xaa Xaa
1378      50          55          60
E--> 1381 <210> SEQ ID NO: SEQ ID NO 50
1382 <211> LENGTH: 60
1383 <212> TYPE: PRT
1384 <213> ORGANISM: Zea mays
1387 <220> FEATURE:
1388 <221> NAME/KEY: misc_feature
1389 <222> LOCATION: (3)..(3)
1390 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
E--> 1392 <400> SEQUENCE: 50
1394 Leu Glu Xaa Asp Gly Asp Leu Thr Leu Phe Glu Ser Arg Ala Ile Ala
1395 1          5          10          15
1398 Arg His Val Leu Arg Lys His Lys Pro Glu Leu Leu Gly Gly Gly Arg
1399      20          25          30
1402 Leu Glu Gln Thr Ala Met Val Asp Val Trp Leu Glu Val Glu Ala His
1403      35          40          45
1406 Gln Leu Ser Pro Pro Ala Ile Ala Ile Val Val Glu
1407      50          55          60
E--> 1410 <210> SEQ ID NO: SEQ ID NO 51
1411 <211> LENGTH: 60
1412 <212> TYPE: PRT
1413 <213> ORGANISM: Oryctolagus cuniculus
E--> 1415 <400> SEQUENCE: 51
1417 Trp Val Phe Pro Thr Leu Gly Ile Met His His Asn Lys Gln Ala Thr
1418 1          5          10          15
1421 Glu Asn Ala Lys Glu Glu Val Lys Arg Ile Leu Gly Leu Leu Asp Ala
1422      20          25          30
1425 His Leu Lys Thr Arg Thr Phe Leu Val Gly Glu Arg Val Thr Leu Ala
1426      35          40          45
1429 Asp Ile Thr Val Val Cys Thr Leu Leu Trp Leu Tyr
1430      50          55          60
E--> 1433 <210> SEQ ID NO: SEQ ID NO 52
1434 <211> LENGTH: 60
1435 <212> TYPE: PRT
1436 <213> ORGANISM: Zea mays
1439 <220> FEATURE:
1440 <221> NAME/KEY: misc_feature
1441 <222> LOCATION: (54)..(54)
1442 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
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1446 Cys Val Phe Ala Pro Phe Leu Gly Arg Glu Arg Asn Gln Ala Val Val
1447 1          5          10          15
1450 Asp Glu Asn Val Glu Lys Leu Lys Lys Val Leu Glu Val Tyr Glu Ala
1451      20          25          30
1454 Arg Leu Ala Thr Cys Thr Tyr Leu Ala Gly Asp Phe Leu Ser Leu Ala
1455      35          40          45
1458 Asp Leu Ser Pro Phe Xaa Thr Ile Met His Cys Leu
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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/712,638

DATE: 05/30/2003

TIME: 11:49:40

Input Set : A:\Sequence 1.ST25.txt

Output Set: N:\CRF4\05302003\I712638.raw

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E--> 1462 <210> SEQ ID NO: SEQ ID NO 53
1463 <211> LENGTH: 60
1464 <212> TYPE: PRT
1465 <213> ORGANISM: Oryctolagus cuniculus
E--> 1467 <400> SEQUENCE: 53
1469 Lys Gln Val Leu Glu Pro Ser Phe Arg Gln Ala Phe Pro Asn Thr Asn
1470 1      5      10      15
1473 Arg Trp Phe Leu Thr Cys Ile Asn Gln Pro Gln Phe Arg Ala Val Leu
1474      20      25      30
1477 Gly Glu Val Lys Leu Cys Glu Lys Met Ala Gln Phe Asp Ala Lys Lys
1478      35      40      45
1481 Phe Ala Glu Ser Gln Pro Lys Lys Asp Thr Pro Arg
1482      50      55      60
E--> 1485 <210> SEQ ID NO: SEQ ID NO 54
1486 <211> LENGTH: 60
1487 <212> TYPE: PRT
1488 <213> ORGANISM: Zea mays
1491 <220> FEATURE:
1492 <221> NAME/KEY: misc_feature
1493 <222> LOCATION: (27)..(29)
1494 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
1496 <220> FEATURE:
1497 <221> NAME/KEY: misc_feature
1498 <222> LOCATION: (33)..(39)
1499 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
1501 <220> FEATURE:
1502 <221> NAME/KEY: misc_feature
1503 <222> LOCATION: (45)..(46)
1504 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
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1507 <221> NAME/KEY: misc_feature
1508 <222> LOCATION: (59)..(60)
1509 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
E--> 1511 <400> SEQUENCE: 54
1513 Met Ala Thr Glu Tyr Ala Ala Leu Val His Ala Leu Pro His Val Ser
1514 1      5      10      15
1517 Ala Trp Trp Gln Gly Leu Ala Ala Arg Pro Xaa Xaa Xaa Ala Ala Asn
1518      20      25      30
1521 Xaa Xaa Xaa Xaa Xaa Xaa Lys Val Ala Gln Phe Xaa Xaa Met Pro
1522      35      40      45
1525 Val Gly Ala Gly Ala Pro Lys Glu Gln Glu Xaa Xaa
1526      50      55      60
E--> 1529 <210> SEQ ID NO: SEQ ID NO 55
1530 <211> LENGTH: 30
1531 <212> TYPE: PRT
1532 <213> ORGANISM: Caenorhabditis elegans
E--> 1534 <400> SEQUENCE: 55
1536 Ile Phe Asp Asn Thr Asn Asp Leu Val Ala Ser Leu Leu Gly Ile Ser
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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/712,638

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TIME: 11:49:40

Input Set : A:\Sequence 1.ST25.txt

Output Set: N:\CRF4\05302003\I712638.raw

```
1537 1          5          10          15
1540 Ser Ile Thr Val Tyr Arg Lys Arg Lys Arg Ile Gly Glu Glu
1541          20          25          30
E--> 1544 <210> SEQ ID NO: SEQ ID NO 56
1545 <211> LENGTH: 30
1546 <212> TYPE: PRT
1547 <213> ORGANISM: Caenorhabditis elegans
E--> 1549 <400> SEQUENCE: 56
1551 Tyr Leu Ser Gly Ser Thr Arg Ala Lys Leu Ala Glu Ser Leu Gly Leu
1552 1          5          10          15
1555 Ser Asp Asn Gln Val Lys Val Trp Phe Gln Asn Arg Arg Thr
1556          20          25          30
E--> 1559 <210> SEQ ID NO: SEQ ID NO 57
1560 <211> LENGTH: 30
1561 <212> TYPE: PRT
1562 <213> ORGANISM: Caenorhabditis elegans
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1566 Ile Ser Arg Ser Thr Ala Lys Glu Val Ala Thr Ala Arg Gly Ile Ser
1567 1          5          10          15
1570 Glu Gly Thr Val Tyr Ser Tyr Leu Ala Met Ala Val Glu Lys
1571          20          25          30
E--> 1574 <210> SEQ ID NO: SEQ ID NO 58
1575 <211> LENGTH: 30
1576 <212> TYPE: PRT
1577 <213> ORGANISM: Caenorhabditis elegans
E--> 1579 <400> SEQUENCE: 58
1581 Leu Ser Ala Tyr Thr Ile Ser Asp Leu Ala Lys His Phe Asn Val Ser
1582 1          5          10          15
1585 Lys Ile Glu Ile Leu Lys Ile Asp Ile Glu Gly Ala Glu Leu
1586          20          25          30
E--> 1589 <210> SEQ ID NO: SEQ ID NO 59
1590 <211> LENGTH: 30
1591 <212> TYPE: PRT
1592 <213> ORGANISM: Caenorhabditis elegans
E--> 1594 <400> SEQUENCE: 59
1596 Asn Glu Val Leu Asn Leu Asn Glu Val Ala Lys Glu Leu Asn Ile Ser
1597 1          5          10          15
1600 Lys Arg Arg Val Tyr Asp Val Ile Asn Val Leu Glu Gly Leu
1601          20          25          30
```

# VERIFICATION SUMMARY

PATENT APPLICATION: US/09/712,638

DATE: 05/30/2003

TIME: 11:49:41

Input Set : A:\Sequence 1.ST25.txt

Output Set: N:\CRF4\05302003\I712638.raw

L:16 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:21 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:1  
L:39 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:60 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:2  
L:62 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0  
M:341 Repeated in SeqNo=0  
L:78 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:83 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:3  
L:101 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:122 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:4  
L:140 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:145 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:5  
L:163 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:168 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:6  
L:186 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:191 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:7  
L:209 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:214 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:8  
L:232 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:243 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:9  
L:261 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:266 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:10  
L:284 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:305 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:11  
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L:346 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:367 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:13  
L:385 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
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L:470 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:486 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:17  
L:504 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:520 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:18  
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L:543 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:19  
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L:572 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:20  
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L:601 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:21  
L:619 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:624 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:22  
L:642 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:647 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:23

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/09/712,638

DATE: 05/30/2003

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Input Set : A:\Sequence 1.ST25.txt

Output Set: N:\CRF4\05302003\I712638.raw

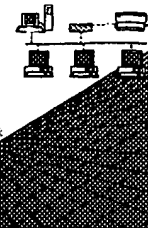
L:665 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:670 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:24  
L:688 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
L:693 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:25



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Revised 04/24/2003